

CA20N  
Z 1  
-80A021

GOVT PUBNS

JUN. 1 1982



3 1761 11649689 4



ROYAL COMMISSION ON MATTERS OF HEALTH AND SAFETY  
ARISING FROM THE USE OF ASBESTOS IN ONTARIO

CHAIRMAN: J. STEFAN DUPRE, Ph.D.

COMMISSIONERS: J. FRASER MUSTARD, M.D.  
ROBERT UFFEN, Ph.D., P.Eng., F.R.S.C.

COUNSEL: JOHN I. LASKIN, LL.B.


APPEARANCES:

|                 |                              |
|-----------------|------------------------------|
| Mr. D. Starkman | Asbestos Victims of Ontario  |
| Miss L. Jolley  | Ontario Federation of Labour |
| Mr. Hodson      | Government of Ontario        |

180 Dundas Street  
Toronto, Ontario  
Tuesday,  
June 1, 1982

VOLUME 38





Digitized by the Internet Archive  
in 2023 with funding from  
University of Toronto

<https://archive.org/details/31761116496894>

ROYAL COMMISSION ON MATTERS OF HEALTH AND SAFETY  
ARISING FROM THE USE OF ASBESTOS IN ONTARIO

VOLUME 38

INDEX OF WITNESSES:

|                       |                              |         |
|-----------------------|------------------------------|---------|
| WILLIAM JAMES SIMPSON | Statement                    | Page 3  |
|                       | Examination-in-chief         | Page 9  |
|                       | Cross-examination (Starkman) | Page 29 |
|                       | Cross-examination (Jolley)   | Page 54 |
|                       | Cross-examination (Hodson)   | Page 61 |

180 Dundas Street  
Toronto, Ontario  
Tuesday,  
June 1, 1982



180 Dundas Street  
Toronto, Ontario  
Tuesday,  
June 1, 1982  
Volume 38

THE FURTHER PROCEEDINGS IN THIS INQUIRY  
RESUMED PURSUANT TO ADJOURNMENT

APPEARANCES AS HERETOFORE NOTED

DR. MUSTARD: Well, if I could call this session to order. You will see that the Commission has been slid down even further today and you have, to use the jargon of the chairman, a pinch hitter in as chairman, due to family circumstances which prevent Dr. Dupre from being here this afternoon...and that's the reason why you see me sitting here.

It's a pleasure to welcome Mr. Simpson before this Commission. Indeed, it's going to be a pleasure to have a person with your wealth of experience testifying before us today and I think perhaps to expedite things we should get along with the task and, Linda, ask you to swear in the witness, please.

WILLIAM JAMES SIMPSON, AFFIRMED

DR. MUSTARD: I understand Mr. Simpson has a public statement?

MR. LASKIN: I believe Mr. Simpson does, and I suppose, Mr. Commissioner, just before Mr. Simpson starts I would like to recognize Mr. Cyril Burgess who is sitting to the





5 MR. LASKIN: (cont'd.) left here, who has come with Mr. Simpson, and Mr. Burgess is the Director of the Hazardous Substances Branch of the Health and Safety Commission in England, and it may be that Mr. Simpson will call upon Mr. Burgess for some assistance throughout the afternoon.

10 Mr. Simpson, you do have, as I understand it, a brief opening statement which you are going to deliver to the Commission?

10 THE WITNESS:: Yes.

MR. LASKIN: Why don't you proceed?

THE WITNESS: Yes.

15 And can I say that whoever is doing the transcript will have to get used to this accent for the rest of the afternoon, because I am a Scotsman. But I understand the Scots accent is not a stranger to the people who live in Canada.

20 Can I say that I speak as chairman of the Advisory Committee on Asbestos, and can I make it clear that this committee was disbanded in 1978, after we published a final report.

20 I am still chairman of the Health and Safety Commission, which I have been since 1974, and as the chairman of the Health and Safety Commission, my search is for acceptability on policies of all kinds, because my Commission cover all...cover the legislative proposals and information for the whole of the health and safety field arising from occupation in Great Britain.

25 That means I deal with all manufacturing problems, as well as dealing with all the service industries. I deal with mines and quarries, with nuclear installations, with farm safety, with railways, with shipping, and with nonindustrial premises. And also, to make it clear that the inspectors which enforce the Act belong to the Health and Safety Executive, which is the operating and enforcing arm of the Commission.

30 When I was thinking about my opening statement,



Simpson,

THE WITNESS: (cont'd.) Mr. Chairman, I had some sympathy for the position that you are in, because you are coming fairly near the contemplation of your final report. So I tried to make my opening statement as aforesight as I could, bearing these circumstances in mind.

And can I say this, for a start, that I do realize that the U.K., the Asbestos Committee report was published in 1979 and that knowledge has moved on since then, and thankfully it never stands still.

The second thing I want to say is that each country finds its own answers. It would, of course, be nice to have an international standard that everybody observes, because asbestos is not a national substance, it's an international substance, and it would certainly make more sense if all the countries had similar controls, and in particular if we all counted the fibers in the same way.

But, each country has got its own starting points. We are locked in on the horns of some kind of concern, which is the reason why these committees were set up in the first place. In the United Kingdom, we had started to legislate with regulations on asbestos, in 1969. And in 1969, we had decided that crocidolite was much more dangerous than chrysotile. So from 1969, we had had a control limit, a TLV as it was called there, for crocidolite, of nought point two fibers per mil.

This meant, in fact, that that is a standard which no engineering can cope with. If you set a standard as low as nought point two fibers, what in fact you are doing is that you are banning the manufacture of crocidolite from that date. You have still got to have a control limit, because you still have crocidolite within your society which may have to be moved, either in demolition or by delagging or something, so a control limit is necessary.





THE WITNESS: (cont'd.) But it's impossible for any exhaust ventilation or any other modern method of extraction to cope with a fiber control limit as low as nought point two fibers per mil. So that means that in Britain we have had no manufacture of blue asbestos since 1970.

The chrysotile limit that was set in 1969 was two fibers per mil, and these kinds of starting points, plus the public concern which was the trigger for the new advisory committee being set up, were our starting points.

I do realize that some of the views that I have expressed are points of issue in some other countries - in the States in particular, where there is a feeling that the blue and white fibers should not be treated differently.

For us that argument was settled as far back as 1969, and so that was one of the starting points that we were locked in to.

The third thing that I want to say is that of course the medical evidence is important, but if you are looking for certainty in the medical evidence, if you are looking for a medical sign post on dust-response relationship which says this is it, and points to a certain set of figures or even a set of collected figures that would give you some exact measurement on it, then I don't think that you are going to find it.

I say this because when decision time comes for this Royal Commission, there are other factors which will also weigh heavily in whatever recommendations the committee might make.

I expect I will be asked to deal with some of the questions flowing from that statement, but the methods of counting fibers, which is the other half of the dose-response relationship, it's reasonably easy medically to see what the response was, but if you want to find out what kind of exposure



THE WITNESS: (cont'd.) levels were causing these medical effects, then you are in a situation where you have to try and analyze what your own experience has been on this, and if you are judging from overseas evidence like the evidence from Rochdale and the women who worked during the war in Britain making gas masks and that, then you're not going to understand what the exposure levels are in today's terms unless you understand the counting techniques.

All these factors tend to blur the evidence on dose-response relationships.

The fourth thing that I would like to say is this, that on the subject of asbestos it's even more careful than it normally is not to generalize from the particular. If you start off with a whole set of figures from certain sections of the industry which were known to have extremely high exposures, but for which no exposure levels are available in relation to the evidence that you get about the medical effects, then it means that if you are generalizing, if you start to generalize about particular information like that, then you are certainly not going to get the correct answer from it.

In other words, if you select industries or even particular occupations like marine insulation or some other insulation work which was done mainly by blue crocidolite in a very, very confined space, then you are dealing with parts of the industry which are recognized throughout the world as being capable of the exposures that are absolutely astronomical.

I say that you've got to have some caution as to how you accept any general conclusions which are being drawn from particular instances like that.

In the end, the solutions which you find have got to be in a whole package, and as well as having medical respectability, which you've got to have - you've got to have some





THE WITNESS: (cont'd.) medical respectability  
for your findings, but in the end you are also seeking out  
a societal acceptance as well.

Again, this could be liable to find its own  
particular level in different countries.

Can I just finish off this opening statement by  
also saying this, that in the wider perspective we are dealing  
with the recommendations from our advisory committee within the  
E.C. at the moment, and we don't know exactly when final  
decisions will emerge on the two directives which are being  
discussed within the economic community...the European community.

We think it's likely that the directive is going  
to be made very much in the image of the recommendations of the  
U.K. advisory committee, but there are some points on this that  
we are still not certain about.

If that became accepted as the European standard,  
then I think it very likely that some of the Scandinavian countries  
and other countries in Europe who do not belong to the Common  
Market, I think it likely that they will follow that standard,  
and if that were true, I would imagine there will be some pressure  
on the North American countries also to have similar standards.

It's far from me to prejudge it, because I did  
start out by saying that I think each country has got to find  
its answers on this, but an international standard would be a  
nice thing to have.

That's my opening statement, gentlemen.

DR. MUSTARD: Thank you very much.

Counsel?

MR. LASKIN: I'm going to just discuss an  
appropriate batting order here.

DR. MUSTARD: Have you a batting order?

MR. LASKIN: They have decided to defer to me,



MR. LASKIN: (cont'd.) Mr. Chairman, so perhaps I can ask Mr. Simpson a few questions.

5 EXAMINATION-IN-CHIEF BY MR. LASKIN

Q. Can I just for a moment go back to one matter you raised in your opening statement, which concerned the question of crocidolite. As I understood what you said, and you tell me if I'm putting this fairly, that when you embarked on your own inquiries in respect of your advisory committee on asbestos, you took it as a subtle question that crocidolite would be treated in a very strict manner because of the position that had been taken as far back as 1969. Is that fair?

A. Yes. Yes, sir. So far.

Q. I only ask about that because having read Dr. Acheson's report, it would at least seem to me that he was prepared to look at the question again, and indeed consider whether crocidolite warranted different treatment from chrysotile.

But do I take it as far as your committee's deliberations were concerned, that matter was a fait accompli?

A. No, it wasn't. I mean, I said that this turned out to be one of the starting points of the committee, that the committee were locked in to.

You see, I think it would have been unthinkable in practicable terms for us to have loosened any of the limits that had been set in 1969. And there is general acceptance within Great Britain that the amphibole minerals are more dangerous than the serpentine minerals, and we have got evidence to show this.

It's true that in some of the studies carried out on rats in particular that they have found that the level of mesotheliomas that they could produce in rats was very, very low. But again, when the same people looked at the evidence on human





5 A. (cont'd.) beings, they found in fact the very opposite of this, and it did seem there that crocidolite was a cause of mesothelioma.

And I'm saying it is the collected wisdom in our country, which we examined again in our report, that there was a reason for treating crocidolite differently.

10 I don't want to teach my grandmother to suck eggs on an occasion like this, but we have had within our own fields many examples...well, a few examples, sorry...a few examples of where a known carcinogen to human beings wasn't a carcinogen as far as rats were concerned. We know in our country, for instance, that betanaphthalymine is a cause of blood cancer with rubber workers. We have filled rats to the eyeballs, in our country, with betanaphthalymine, and we have never been able  
15 to produce a cancer.

So these funny crossover factors do arise from time to time. But as I say, the evidence that we looked at, again, did, you know, confirm to us, despite the slight reservations that Donald Acheson entered, that there was good reasons for  
20 treating crocidolite differently from chrysotile.

In fact, we did go on to treat the other amphibole, amosite, differently from chrysotile in our report, because we set the control limit for this at half a fiber.

25 Q. On a more general level, the approach your commission takes to dealing with hazardous substances, is the relative weight that you might give to animal experiments as opposed to human epidemiological studies fairly consistent with the way that you treated them in the asbestos field?

30 A. Yes. It's difficult to give an unqualified yes to that, but I think at the moment that all the developed countries adopt rather the same kind of policy that we adopt, in trying to find triggers for action as far as what substances



A. (cont'd.) should be controlled.

5 It has been a rather brutal policy so far. I call it waiting for the bodies, and of course this is what we do when we are dealing with carcinogens, where for twenty-five years or thirty years you are in what the medical people call the 'iron grip of latency'. You know, you are waiting for twenty-five or thirty years to see in fact whether something is going to be carcinogenic.

10 There may be a good case some time in the near future for ceasing to do that, but it's certainly not with us at the moment.

15 Q. To come back to your recommendations and just focussing on the control limits for a moment, am I right that the control limits that you recommended are consistent with the proposals of the E.E.C. in respect of chrysotile and crocidolite, but not amosite?

20 A. As far as...I'm not sure even about the situation as far as crocidolite is concerned, within the Common Market. But I don't think this has got as much to do with the danger from crocidolite as the position of strategic importance which it occupied within the Common Market.

25 I understand, for instance, that most of the water mains leading to some of the most important industrial areas in Europe, like the Ruhr, that the water is carried by huge asbestos pipes. It's impossible to spin pipes of the diameter, which is required in water systems like that, using chrysotile. I think about a meter or slightly over a meter is about the highest diameter pipe which can be spun with sufficient strength to provide pipes for water mains.

30 This is not so with blue asbestos. The short fibers and the nature of the fibers means it's a very, very strong fiber indeed, and for these reasons I am rather uncertain





A. (cont'd.) as to how the European community is going to treat crocidolite.

5 Certainly as far as amosite is concerned, it looks as though there's going to be...that amosite is going to be placed on the same control limit as chrysotile - at one fiber, and what we have said, if this is done, then we think it absolutely essential that the information, the new information which is coming out and which we believe will keep coming out on asbestos, 10 would mean that this limit should be subject to review fairly shortly.

Q. What input, if any, did your recommendations in your report have into the thinking of the E.E.C.?

15 A. Oh, I think it has been fundamental in the thinking of the E.C. I think in any organization like that, if you produce a report which is practical because it is achievable, and you say because of the work that had been done previously in our country in enforcing the regulations that I talked about, the 1969 regulations, the manufacturers had (a) started to think about substitutes in Britain far more quickly 20 than a lot of other places, and (b) they had also started to improve their control measures as well.

25 So that when we set one fiber for chrysotile, in fact there were only a few companies by this time that were subjecting workers to exposure levels above that, that even with asbestos-cement products where most of the chrysotile was being used, the employers were producing to less than one fiber.

Even with the parts of the industry using amosite, which was mainly the parts making insulation board, the majority of these had already got down below point five of a fiber as well.

30 So the fact that these limits were achievable, as seen by our experience in Britain, means that our report did carry, the control limit part of our report did carry a lot of



A. (cont'd.) weight in Europe.

5 Q. Mr. Simpson, can you tell us generally what is the status in England of all of the recommendations that you made in your report? In other words, have any of them actually been implemented either by legislation or regulation, or in some other manner?

10 A. Well, all the regulations...the regulations in the final report, forty-one recommendations in the final report, some of these applied to industry, and quite a lot of them applied to the public.

As far as the public were concerned, for most of these regulations we weren't the regulation-making body, and so we farmed these recommendations out to the other government departments that were concerned.

15 Nearly all the other recommendations in the final report went to the European community, to be dealt with there through directives three and directives five.

20 But the committee started off their work by producing two reports before they produced the final report. They did this because they felt that there was a situation with regard to thermal, acoustic work, demolition and delagging that really did need some attention straight away.

25 And now some of that report has been implemented. For example, we have issued an approved code of practice which has a legal status, which states the methods of working that should be followed when demolition or delagging takes place.

30 Because these processes lend themselves to very, very small companies...you know, the one-man-and-a-boy type of thing...and because it's absolutely impossible...it's very difficult to enforce the exposure levels in these cases simply because you don't know where the work is going on. You are not dealing with a factory situation, you are dealing with a



5 A. (cont'd.) peripatetic situation where these workers move about all over the country, to one place and another, sometimes spending half a day on a job, sometimes spending a day on a job, sometimes spending two days on a job, or longer... but a situation which is difficult to control, and so we decided in our first report that the best way to try and get some control on this very, very dangerous section of the industry was to introduce, in fact, a licensing system for all these companies.

10 In other words, they would have to register with the enforcing authority before they were allowed to carry out this work, and if on the basis of what the enforcing authority's analyses were of the general standard of work in the company, general standard of knowledge about the dangers from asbestos, upon this knowledge they would either get a licence or they  
15 didn't get a licence.

If they didn't get a licence, it was an offence legally for them to carry out any of this work. Similarly, it is also...it will also be a legal offence for any person to have work carried out on their behalf by people who don't have a licence.

20 This licensing scheme is already to go into operation now. The other part of the report, the part of the second report which has been implemented is the part which recommended that essential reference laboratories should be set up, with a view to cross-checking on all the testing samples that were being done by testing houses within the country, and  
25 as a second task they would have the job of trying to introduce a standard method of counting that could be accepted, certainly within Europe, but, we also hoped, internationally.

I understand that your commission has been very closely involved in this. We've now got the essential  
30 reference laboratory method, which has motivated the Asbestos





5 A. (cont'd.) International Association, Employers Association, to produce their own method, and somewhere in there we've also got a Canadian compromise, and there's talks going on in Nassau at the moment to see whether in fact it's going to be possible to set an international standard.

10 If there was a standard, and this really comes back to my point in my opening statement about the importance of counting. It would mean that the standard reference method of counting would be included as an annex in the European community directive, so fibers would be counted in this particular way.

15 Q. Can I make sure I just understand one more matter about your control limit? I gather from reading your report that for one thing you changed the name from hygiene standard to control limit, but if I read the report correctly, that was not intended to be merely a change in name for the sake of changing a name. As I understood your report, what you were saying was - here is a limit above which we don't want firms going, but in addition to complying with that limit firms have another duty...

20 A. Yes, sir.

Q. ...which is to reduce their levels as low as is practicable?

A. Yes.

Q. Which may be well below one fiber per c.c.?

25 A. Yes.

Q. Is that fair?

30 A. That's exactly true. Perhaps I should maybe make some explanation here. It was felt very strongly on the committee that if you are going to set a figure and you expect someone to do something about it, about exposure, on the basis of these figures, then we've really got to get away from terms



A. (cont'd.) like threshold limit values. What does a threshold limit value tell an employer he has got to do?  
5 What does a hygiene standard tell an employer he's got to do?

Standards are things that are aimed at, and if you don't happen to hit them, so what. If you really mean that people shouldn't have exposures beyond a certain figure, then you are talking about your limit and you are talking about a limit that's a control limit. So this was one of the departures in  
10 our report.

You know, we keep getting periodically, I don't know whether it's bi-monthly or quarterly, the report of the American Conference of Industrial Hygienists, which is full of threshold limit values. And of course people are puzzled about what these figures do imply...particularly working men who are  
15 not working people.

But also, we've got something else in our country which is the doctrine of 'as far as is reasonably practicable', which comes into our language quite a lot. This means, in fact that the risk has got to be balanced with the cost on some  
20 occasions.

Q. But to take a specific example, suppose I'm a firm and I'm operating and you do measurements and you find out that I'm below one, that I'm at point seven five fibers per c.c. Can I be...I mean, are there enforceable sanctions that the commission or the government can bring against me because I am  
25 not down to point two five, or point five?

A. Well, in present-day circumstances the answer to that would be no.

Q. No, I know it's not in force, but hypothetically, let's assume your system is in force.

A. Yes. We do have, we call these things control  
30 limits. We also refer to them as maximum exposure limits, and





A. (cont'd.) employers are required by a legal duty to get below that as far as is reasonably practicable.

5 It could be enforced, but in fact Cyril Burgess there knows more about enforcement than I do, because he was an inspector before he became the head of the Hazardous Substance Policy Branch.

10 But I take it that this is what's happening at the moment, that the inspectors are making sure that they get down below the one fiber control limit.

Q. What is intended to be meant by 'reasonably practicable', and what factors go into that assessment, and secondly, in your judgement...I mean is it practicable to be able to expect that you can enforce a duty like that, if a company is meeting your control limit?

15 A. Yes. Well, I mean, it has been done. You know, we have enforced below a control limit before, yes.

20 It's something which is accepted in our country, and you will find that most of the larger companies in our country that are dealing with asbestos are considerably below the one fiber limit...you know, point eight, point seven, point six...and some of them as low as point four.

Q. Is there a cost calculation envisaged in 'reasonably practicable'?

25 A. Yes. Well, the cost calculations that we carried out initially were done on the basis of keeping it to one fiber or below, and although we got some kickback from the industry, you know the fact that our industrial intelligence was telling us that in fact it was being done in most places, you know, gave us courage to carry on and do this.

30 But we did cost this out in three particular ways - one for the industry concerned, and the industry co-operated in providing the cost figures. But we also costed out what it would



5 A. (cont'd.) mean for the health and safety executive who housed our inspectorate for the extra visits or the concentration on asbestos which would be necessary as a concomitant of our recommendations. We also costed out what it would cost some of the other government departments - environment, people dealing with waste disposal, people dealing with water, river pollution and so on, and the food and drink industry as well.

10 I could give you, if you felt that a note on these costs would be helpful to you, you know, I could give you a note on these costs if you want it.

15 Q. The calculations, I take it, were done for the purpose of trying to make some reasonable assessment as to what it would cost all those who had an interest in this matter to go down to one fiber?

20 A. Yes. Well, I mean, if you sort of half the control limit, as we did, from two fibers to one fiber, then you are liable to get an outcry from people saying it's absolutely uneconomical to do this. And you can't sit back defenceless and let this argument all over you. You've got to do something about it, and so you involve them in the costings and you cross-check them, and we came out with answers which, in the end, were acceptable to them.

But our answers showed, in fact, that these things were not as economically crippling as the industry were making out.

25 Q. To go down farther below one fiber, to go as low as reasonably practicable, in your terms, does that require yet another cost calculation?

30 A. Well, it's not a steady cost progression. You see, once you have...if you are having to put new equipment in, if you are having to look at all the well-known principles of control, which include things other than just cutting down the amount of asbestos that's out there - you've got the whole business



A. (cont'd.) of separation and enclosing the process and so on, so that a process that might be giving off one fiber might not pollute the rest of the work place.

So I don't think that you could say if it costs so many million pounds to come down from one point five fibers to one fiber, that it's going to cost anything like the same to get it down below. With some substances that could be difficult, but my experience - and I have got a fairly detailed knowledge of the way companies have thought about this - it doesn't lead me in that direction.

Q. What was the contemplation of controlling a workplace where there were different fibers being used? Suppose you have a workplace where you've got amosite and chrysotile being used, what kind of control limit did the committee contemplate?

A. Well, in these situations the inspectors would enforce the point five of a fiber.

Q. Throughout?

A. Yes, throughout the whole factory...throughout the places in which both amosite and chrysotile were being used.

Q. So that as a practical matter, if you've got a workplace where there is a small amount of amosite, but still some amosite, and a large amount of chrysotile, you are still going to have to meet point five for chrysotile?

A. You know, this is up to the employer to sort out, really. If he decides that it makes sense economically for him to have amosite and chrysotile operating in the one workplace, then he's also got to face the facts that in doing this he's got to keep exposure limits down to half a fiber or less.

Q. Is there a great deal of amosite being used in England right now?

A. Well, the whole production of asbestos is





5 A. (cont'd.) declining, because although there was again a huge outcry about the time it would take for employers to get into substitute materials, in fact the pace of change has left me very, very surprised indeed. In the middle of the 1970's, there was a hundred and fifty thousand tons of raw asbestos being imported into the United Kingdom. In 1980, ninety thousand tons of chrysotile, of the white asbestos, was imported, and nine thousand tons of amosite. So amosite is accounting for about ten percent of the fiber being used there now.

10 Q. And you've cut your imports by a third?

A. By a third.

15 That doesn't mean that there is less of the products being made. In fact, the third less in asbestos is being made up by other materials, by substitute materials, and in exactly the same line of products.

Q. Can we talk just for a moment about buildings, which I take it was one of the matters that your committee looked at?

A. Yes.

20 Q. Do I take it that in a very general way you didn't find any real problem in terms of exposures in public buildings?

25 A. Yes, that's true. We had a whole lot of scary stories, which I think is quite right, if the public are going into buildings. Bad enough a workman going into a workplace to earn a living, but I mean, there's even a slight difference between that and the public going into a public building.

30 We did have some quite inexcusable stories about death in the home and even in respectable papers like the Sunday Times we had headline, How Asbestos Can Turn Killer in the Home, and other papers like the Daily Mail saying, Is Killer Dust Being Swept Under the Mat, which is all good knock-about journalism, but it lacks accuracy and knowledge of the subject and the



A. (cont'd.) circumstances. The Sun, another of our very well-informed papers, talked about the Deadly Asbestos Bullet, and things like that.

So that we found that there were cases where people were quite rightfully concerned. For instance, where a ceiling was completely composed of, say blue asbestos, and where that ceiling was near to a ventilation system using forced air, or a heating system using forced air, and where the ceilings were in a damaged state, then you did have a possibility of the fiber being blown about the building in a rather dangerous way.

But all the monitoring that we did showed the exposure levels to be very, very small indeed, and, you know, you've got to treat everybody's problem seriously, but I found it sometimes difficult to talk to, say, our Consumers' Association who argued that if you've got an ironing board with an asbestos on the end of it, that if the asbestos pad got worn, then the housewife in folding the ironboard up wore a woolly jumper, and if the fiber stuck to the woolly jumper would she be breathing them in all day after that...I mean, I think that some of these things were slightly exaggerating the risk, I would say, there.

But quite true, we didn't find any evidence of real danger as far as buildings were concerned, and in fact in answer to a similar question in Montreal last week, I did say that provided...if they had blue asbestos about, provided it wasn't near an air-ducting system, and providing it wasn't damaged, then by far the safest thing to do at this time would be to give it two or three coats of sealant and leave it there, because I think that there was a lot of our municipalities, you know, probably caused far more dust, asbestos dust, than was really necessary by immediately running the eye over their buildings and trailing out every piece of blue asbestos that





A. (cont'd.) they had in the building.

Q. Did that happen? Is that happening?

5 A. Oh, yes, that did happen, particularly in flats.

Q. What about schools?

10 A. Well, I know that's one of the reasons why we're here today, but we had some instances in schools, but our main problem seemed to be in flats and in the communal part of flats, the buildings where the lift shafts, the lifts opened, and things like that.

Q. So I take it removal is something that you and your committee would not recommend, except in the clearest of cases?

15 A. Yes, well, the techniques of removal...you know, I started off in my opening statement by saying thankfully that knowledge never stands still. I think this is an area, now, where we've got some very, very expert companies operating now, is in the removal of asbestos, and it's possible for them now to demolish asbestos, particularly in public buildings, and put  
20 it into a sealed skip. Do you have a word called 'skip' here? A big sort of iron containers that lie at the side...you've got them here, but you maybe don't call them skips.

25 Anyway, it's possible to have exhaust systems that work up to about a hundred and ten yards away from the place where the work is being done, and it means that the asbestos dust is under complete control from the point of extraction right to the point where it's deposited.

Q. Is removal the exception or the rule in England when you are talking about controlling asbestos in buildings?

30 A. I don't think I'm qualified to state what's the rule at the moment. I should think that in many public buildings they have been quietly getting rid of it.



5 A. (cont'd.) For instance, as a little anecdote, one day when our members of parliament were talking in the House of Commons, there was some dust fell through the gratings in the roof above the old building, and they discovered it was asbestos. So, luckily, it was fairly near one of the recesses...not a long recess where they weren't sitting, but something like ten days, so we had to go in and supervise the operations there for the removal of that asbestos, because that was in a damaged state.

10 So I did send a letter to every member of parliament, you know, telling them that this had happened, and that this work was carrying on. And when they came back, they weren't able to go straight in to the ordinary House of Commons, they had to use the chamber in the House of Lords for some time, but because of the...I think because I wrote to all the MP's and  
15 told them what we were doing, and didn't try to hide it, I think that everything went remarkably smoothly on that occasion - even for members of parliament.

20 Q. I know one of the other...one recommendation you did make in your report was to have some ongoing review of the asbestos problem, and I think if I recall you recommended that the matter be delegated to the advisory committee on toxic substances?

A. Yes, which is one of the advisory committees of the commission.

25 Q. And is that happening?

A. Yes, that is happening there.

Q. Is it a permanent committee?

30 A. Yes. It's there all the time. I mean, it won't be disbanded...you know, Cyril Burgess might wish it would be disbanded some time in the future...but it's going to be there, because we've got ongoing problems.

Q. Is it scientists only, or is it...what is



Q. (cont'd.) its composition?

A. It's composed of workers, employers and scientists, and medical people - as few of the latter as is possible.

Q. And it is in the process of continually reviewing standards and related issues, and reporting to the executive of the health and safety...

A. Yes. There's two things going on. First of all, the advisory committee on toxic substances helped the commission to shepherd the recommendations from us across the channel into Europe, and gave us advice on that.

The second activity that's going on is that a factory inspectorate have been following up the recommendations of the report, and over the past couple of years, in fact, they have made eighteen thousand visits to asbestos factories and asbestos processes, so the reason why I'm able to talk so emphatically about the observance of the control limits is because this kind of monitoring is going on at the moment.

Q. What is your general conclusion on industry's ability to meet...

A. Oh, they are meeting it. There's no doubt...

Q. They are meeting one?

A. ...that they are meeting one, and I could say with absolute confidence that I don't know of any place in the United Kingdom, which is manufacturing asbestos, which is not meeting the one fiber limit.

Q. In all processes?

A. And I've gone myself to some companies that were pointed out to me by employers as being examples of how maybe someone was getting away with it, as they say, and I've gone to these companies and checked up on them, and they, too, were below the one fiber limit.

So there's no doubt about it, that the one fiber





A. (cont'd.) limit is achievable.

Q. Because I note in your report that you contemplated that there may have been some processes and some places which couldn't meet your one fiber proposal, and then you consider alternatives as to how to deal with that. But I take it from your evidence here today that that has turned out not to be true?

A. There's often a difference between what you are told and what the actual practice is, as you well know.

What happened on this occasion was that we were prepared to probably consider giving some processes a bit extra time in order to hit the one fiber limit, but in fact the time lag in the European community, because our recommendations and the work of the commission were overtaken by the European community directive, in fact the ordinary delay that goes on in the Common Market has taken care of all these situations as well.

Q. Just perhaps one or two questions not directly related to asbestos, but can you tell us just generally on occupational health and safety regulation in the workplace, can you tell us a little bit about the safety representative, which I gather is a new figure in the workplace in England?

A. Yes. Well, we did introduce legislation which gives the trade unions the power to appoint safety representatives in all workplaces. This was without regard to the number of people who were employed there, so that in theory if there were two workers, one of them could be a safety representative.

We found that although that sounds a bit ridiculous, we didn't see why in very dangerous processes employing ten workers, in maybe a corrugated iron shed somewhere, why they shouldn't have a safety representative there, and yet we were requiring them maybe on the basis of numbers in other occupations that were very safe.



5 A. (cont'd.) So that legislation has been in place now for over three years. There's been a hundred and seventy thousand safety representatives appointed, and also the legislation did make it a legal duty that a safety representative requested that a safety committee be set up, there was a legal duty on the employer also to set up a safety committee as well.

10 The safety representative doesn't have statutory... he doesn't have statutory duties under the Act. He's got statutory functions. This was done because it could have led to a lot of legal problems if a safety representative asks something to be done, and as a specific result of that request someone was injured, and the injury could be tied back to the request by the safety representative.

15 The safety representative's main statutory functions include the day-to-day taking up of complaints from members, the function of doing statutory inspections of his part of the works at intervals - a minimum period between visits, three months - but he could do them more often than that with the co-operation of the employer. He has also the  
20 statutory function to receive information from the employer, and there's a whole long regulation there that states the kind of information that should be revealed to him.

Q. And the joint committees, the safety  
25 committees, are they composed equally of employer and employee representatives?

A. They don't need to be, and in some cases  
they are composed equally of employers and workers, but we  
decided not to make any recommendations on the representation  
on the committee. Instead of that, we published something like  
thirty-five paragraphs of guidance showing examples of safety  
30 committees that were working satisfactorily, and in these cases we describe the kind of setup.



5 A. (cont'd.) There is a feeling within some employer circles that if you set up safety committees in equal numbers that you are really going out of your way to make them adversarial. If you are prepared to run them with only one or two employers - let's say you had a committee that was made up of twelve people. If employers want to run them with three management and nine workers, then it seems to work better as a committee than if it's six a side.

10 Q. Do they have any powers or are they basically an advisory body?

15 A. They've got slightly different functions from the safety representative, because their job is really to monitor the overall performance of the work, including the performance of the safety representatives and the foremen or charge hands in each department.

Q. But can they make any decisions? Are they a decision-making body?

20 A. Yes. Well, they make decisions, but the decisions have got to be agreed on the committee.

Q. Unanimously?

25 A. No, not necessarily unanimously, but you couldn't have a committee where the nine workers agree to do something and the employers didn't agree with it, and it went into operation. The people who have got the statutory function there is the safety representative.

30 The other interesting thing that we did here, that we decided here, is that as soon as you start to tackle legislation like safety representative legislation, you've moved away from situations like control limit situations, or putting guards on machines. You're moving to a type of health and safety which is situational, if you get my meaning, because it deals with situations that can arise, and if the safety





5 A. (cont'd.) representative produces his report based on his inspections, and says to the management these things have got to be done, the management has got the right to say, I don't think they should be done.

So what you do here is you move, you can move from what started off being a health and safety situation into an industrial relations situation. That's why I call it the situational question.

10 The same question can arise in manual handling. If a man, if a person...I better watch myself...if a person is asked to lift a weight and he says it's too heavy for him, and the management says, no, I think you are quite able to lift that weight, if the man says no and the employer says, well, I'm going to suspend you or I'm going to dismiss you, you move from  
15 a health and safety situation into an industrial relation situation.

With my kind of background on this, I realized only too well that these things could arise. So the questions where there's disagreement between the safety representative and the employer, these are put into the normal procedure, to be dealt with through the normal procedure of industrial  
20 relations there. And this really brings together both sides of the work within the factory - the industrial relations side and the health and safety side.

It depends upon your philosophy here, but I find it impossible to separate the two. I don't believe that you  
25 put health and safety up on a pedestal in a corner of the workplace and say, well, we're going to argue about everything else, but we will never argue about health and safety because we are all determined to do the right thing.

That's never been successful in the past, and I don't see any reason why we should think it should be successful  
30 in the future.



MR. LASKIN: Mr. Chairman, I've always been accused of monopolizing questioning time, so perhaps I'll defer to my colleagues and if there's any time at the end, I probably will have some more questions.

Thanks, Mr. Simpson.

DR. MUSTARD: Who's in the batting order?

CROSS-EXAMINATION BY MR. STARKMAN

Q. Mr. Simpson, I would like to deal first with the anecdote you mentioned about the dust in the House of Commons. I take it that some dust fell through some grating into the House when members were sitting?

A. Yes.

Q. Did everyone immediately leave the House when that happened?

A. No. They didn't know about it at the time, really.

Q. But when they found out about it, they didn't want to go back in?

A. As I say, and I know it sounds a bit farfetched, but it did actually coincide with a time when they were going into recess, and they were away for ten days. So when I had to send letters to them, I sent letters to all their homes because they weren't in session in the Commons.

Q. So they were going on recess, and what were the dust levels in the chamber?

A. Well, the dust levels were enough to cause concern. Not anything like the dust levels that we are talking about in industry, but I mean there was no need for dust levels to be there at all.

Q. Did you monitor the dust levels?

A. Yes.

Q. What were they?



A. Oh, I think they were something like point three, or something like that, in certain places in the chamber.

5 Q. That would be the high level, point three?

A. Probably, yes.

Q. And the members went on vacation or were off on recess for ten days, and then how long after they came back would they sit in the House chambers?

10 A. How long did they sit in the House of Lords before they got back into chambers?

Q. Yes.

A. I think for about two to three weeks, from the basis of my knowledge.

15 Q. So two to three weeks, and they were off for ten days, so that was approximately...

A. Say between four and five weeks.

Q. Four and five weeks is the amount of time that they felt it necessary to vacate the chamber before it was safe to come back in there?

A. Yes.

20 Q. At dust levels of point three?

A. Yes, but that's the time that it took to take down a given amount of asbestos which was above the gratings in the ceiling of the chamber, yes.

Q. Oh, so the work continued after the ten day recess? It took longer than ten days to...

25 A. Yes, it took longer than ten days to do that.

Q. But that was the type of cleanup that was necessary...

A. Yes, but...

30 Q. ...when it was discovered that dust was falling down from asbestos overhead?

A. Yes.





Q. It took about five, four to five weeks to clean it up?

5 A. Yes. Well, it took four or five weeks to remove all the asbestos which was in position above the gratings. It would only take a few minutes to remove the stuff that had fallen, because it was a very, very light dust indeed.

Q. And you were present during the cleanup?

A. No, no.

10 Q. The levels of...that are recommended in your report, I take it just for my clarification, are one fiber for chrysotile, point two for crocidolite and point five for amosite?

A. Yes.

Q. Would that be...

15 A. Yes.

Q. And those are the fibers...excuse me, those are the levels that are in fact in effect at this time in England?

A. Yes.

20 Q. And you said that you recommended point two fibers for crocidolite because that was a level that nobody could meet?

A. Well, that was a level which had been set in 1969, in previous regulations. And in setting that level it was realized that it was impossible to manufacture blue asbestos in our country from that date onward.

25 Q. Why didn't they just ban it?

A. Well, because what we were doing was in fact to ban it, but you've still got to have a control limit there because it's got to be removed some time. So it doesn't matter, if you were going to ban blue asbestos in Canada tomorrow, you would still have to have a control limit for the removal of the blue asbestos which is within your society.

30 Q. But the way it's worded now, if someone could



Q. (cont'd.) meet the point two...

A. It's impossible to do it.

Q. But if they could, then they could carry on  
5 a manufacturing...

A. It doesn't make any sense to say if they could meet it. If they can't meet it, then that's a fact. And that's it.

10 You see, the other part of...another recommendation in the report does in fact ban, a recommendation to ban the import of goods coming to Britain which contain blue asbestos, there's a ban on that.

Q. So there is a ban on that?

A. There is a ban on products containing blue asbestos, in the recommendations of our report.

15 Q. I guess what I'm just getting at is, wouldn't it have been simpler to ban it, with exceptions for the removal or movement of it for purposes of removal?

A. It could have been done like that, but everybody in our country, I think, understood the situation fairly well there. We knew that in fact it was impossible to manufacture  
20 blue asbestos with a limit of point two.

But as I say, it's something that we had lived with seven years before the advisory committee had been set up.

Q. So you see the point two as being, effectively,  
a ban?

25 A. Yes.

Q. It's just put in different phraseology.

A. Oh, yes. It's a ban on manufacture, but see, if you had...as I say, you've got to have some control limit for getting it out of your society if you want to move it.

Q. Dealing now, then, with chrysotile...

30 A. Chrysotile.

Q. And the limit there is one?



A. Yes.

Q. In your opinion is there some, is there a remaining risk for people working with asbestos, at that level?

A. Well, there is some differing viewpoints on this, medically.

Q. I think I questioned your opinion, or the opinion of your committee.

A. Yes. Well, my opinion would be no. But, you know, it could be a fairly long answer.

I believe that if somebody were exposed to what I call fifty fiber years - that's one fiber for fifty years exposure - then it's my opinion that he wouldn't be disabled from chrysotile.

Now, I say this because we thought that this was where the threshold lay for asbestosis, and in saying that, the committee was taking a very, very pessimistic view, because we were working from medical records where certain exposure levels had been recorded from 1947, 1948, 1949. This is where you pays your money and takes your picks, really, that two fibers measured in 1949 could be measured today as somewhere between four and ten fibers.

Q. Because of the more sophisticated measuring devices?

A. Correct.

Now, there's no person can give you a definitive account of the multiplicative changes that took place when they changed over from, say the thermal precipitator to the static membrane filter sample in 1964, in the U.K., or when they changed over from the static membrane filter to the personal sampler on each worker, which automatically increased, gave you an increased count of exposure levels, and then finally you've got the changeover from doing whole-field counts to counting using eyepiece graticule.





5 A. (cont'd.) In modern...one of our problems on modern reference method today is that you do have -- huge scanning machines and electron microscopes which are giving you even a sharper definition of the fibers - the Victors M88 and the Magicscan, the automatic image analyzer - all these things, plus other agreed rules in the counting of fibers...you see, we don't know in Rochdale if there were three or four fibers together whether that was counted as one fiber, or two fibers, or three 10 fibers or four fibers.

Q. I guess...

A. It's a very, very complicated thing, but if you don't understand it, then you don't understand the exposure levels and the control limits for asbestos.

15 Q. But you are satisfied, as I understand it, that there is virtually no health risk as long as exposures are kept below one fiber?

A. Yes, for chrysotile I would go on record as saying that, yes.

20 Q. You don't subscribe to any of the studies which suggest that there is a linear dose-response relationship?

A. I think there could be a linear dose-response relationship, but I think it's...I think that it's difficult to calculate this because we know what the response is in linear relationship, but we don't know exactly what the dose is, and even within our report...I mean, we promote the hypothesis 25 there of a linear dose relationship in a table within our report, but as I say, we have used the conversion factor on all these things, of two. You know, this is our conversion factor. The conversion factor is, in my opinion, certainly more than two, and it could be as high as three or it could be as high as five, 30 and if you do that, it alters the whole shape of your line.



5 Q. I understand that, but regardless of what conversion factor you use, if you accept the proposition that there is a linear dose-response relationship, then someone working with asbestos and at exposures less than one fiber, there is a health risk.

A. Yes, there is some medical evidence that suggests that there isn't a linear dose relationship - there is some statisticians who have got a graph...

10 Q. We're aware of that. I'm asking what you think, not what everyone else thinks.

A. Yes. Well, I believe that there is a linear dose-response, yes.

15 Q. You believe in linear dose...and you believe that there is no health risk at less than one fiber?

A. At less than one fiber.

Q. You don't see those as being incompatible in any way, those two positions?

A. No, no. I don't.

20 Q. Well, if industry in the U.K. is meeting the one fiber limit at this time, and if that is a safe level, what is the need to continue the research into substitutes for asbestos?

A. Hmm? What's needed to...I didn't catch that.

Q. I'll repeat the question.

A. Yes, thank you.

25 Q. If industry is meeting the one fiber limit, and if there is no health risk at less than one fiber - to the worker - what is the need for continuing research into substitutes for asbestos?

30 A. It's the employers that are researching into substitutes.

Q. And why are they researching into substitutes?



Q. (cont'd.) I understood they were researching into substitutes because they were afraid of the lowering of the threshold standard.

A. No. Well, they have been moving into substitutes for some time now, employers in Britain anyway. I mean, I've given you the import figures for raw asbestos, which is used in manufacturing, coming into the country, which have fallen by a third since the middle of the 1970's there.

Q. Well, you've read this proposal from the E.E.C. concerning asbestos? Are you familiar with that, or have you seen it?

A. I don't know whether I'm familiar with it or not.

MR. STARKMAN: Do we have a copy that Mr. Simpson can look at, the supplementary compendium of articles?

DR. MUSTARD: Is this number thirteen?

MR. STARKMAN: Yes, number fourteen, sorry.

MR. LASKIN: You have in front of you, Mr. Simpson, two red volumes of documents, and Mr. Starkman will tell you a tab number and for our purposes we have given those documents an exhibit number, exhibit fifty-three, and if you look in the tab...

MR. STARKMAN: I'm at tab fourteen.

MR. LASKIN: Tab fourteen.

THE WITNESS: Ah, yes.

MR. STARKMAN: Q. I'm looking at, I guess, article four.

THE WITNESS: A. Yes.

Q. Number one says:

"Asbestos shall be replaced by suitable and safer substitutes when these are available". Doesn't that seem to imply that it shall be





Q. (cont'd.) replaced regardless of whether or not production is taking place at less than any threshold limit?

5 A. Yes. You are dealing here with the E.C. directive. You see, we did say something about substitution in our report. In fact, we put a duty on the employer to consider substitution, and we also placed a duty on the health and safety executive, within the recommendations in our report, to be able to advise on substitutes.

10 So in a way we set the ball rolling on substitutions, but the question you asked me was about our research into substitutes. We are not doing any research into substitutes.

Q. All right. So all of the research into substitutes is being conducted by industry?

15 A. I wouldn't say that. I think that there may be some research going on in some of our universities, or places like that.

Q. I guess what I'm driving at, there is no government agency or body which is conducting research into substitutes for asbestos?

20 A. Not to my knowledge, anyway.

Q. Now, why would industry want to conduct, why would the asbestos industry want to conduct studies into the substitutes for asbestos if there is no health risk at the levels upon which they are presently carrying on business?

25 A. Well, you've asked me a question about the health risk, and I've given you my answer there.

My feeling on the employers' attitude is that a lot of them have decided that there is too much heat on them if they stay with asbestos.

30 Q. Why would they get that feeling if they are working at a safe level?



5 A. Well, you would have to ask them that. But I mean this is...this is the reason why I feel that they are moving into substitutes, and they are doing it at a level...they might well feel that the continuing duty which is on them to get below one fiber as far as is reasonably practicable is going to be too onerous for them. I don't know. But they are certainly chasing into substitutes very quickly.

10 Q. This duty that's on them to go below one fiber, is this a duty that's placed on them by the government?

A. Well, it's not...you've got to remember it's not in operation yet, because we are waiting for the E.C. at the moment there. But it is a principle which we adopt in other parts of our legislation, where we may set a limit but we also require people to do their best to get below the limit, as well.

15 Q. Even though there's no need to go below the limit?

20 A. Oh, well, sometimes a balance is struck and there might be opinion one way and there might be opinion the other way, and probably the safest thing to do is to get it down below, as low as people reasonably can.

25 I mean, there's nothing wrong with this attitude, and health and safety, the legal limits are not set like driving on the roads, you know. There's improvements that can be made and in fact the control limits of tomorrow will probably follow the better practices of today.

30 So when you recommended the one fiber standard, you mentioned that you did some cost benefit studies...

A. Yes.

Q. ...and I guess into the costs of reducing to the one fiber standard. In that, as I understood it, you said there were three things - one was the cost to industry. I take it that's the cost of the capital equipment and the



Q. (cont'd.) cost of rearrangement of production,  
if any?

5 A. Yes.

Q. The second thing was the study of the cost of  
employing health and safety inspectors and the type of administration  
that would be necessary to carry on that activity?

A. Yes.

10 Q. And the third was the cost to other government  
agencies, that's correct?

A. Yes.

Q. Did you analyze the cost to the workers of  
carrying on production of asbestos at levels greater than one  
or greater than point five? And what I'm referring to here is  
the social health cost, the social cost to the families involved,  
15 etc., all those considerations. Was that study done?

A. Well, it's difficult to do that study, isn't it?  
You know, we were starting out to set...well, to look at the  
problem and then we were doing three things, really. We were  
looking at the size of the problem in our country and we did  
20 decide that there was a problem large enough to be tackled.

You know, something like, at the moment, about  
four hundred and sixty deaths from mesothelioma alone are likely  
to arise, compared with a total of about seven hundred people  
killed in industry from all causes every year, showed that we  
had a problem here which really needed attention.

25 Our work was to fix recommendations which would,  
as far as the committee could judge, would cater for the wellbeing  
of people in the future.

Q. So I take it the answer is, no, you didn't do  
studies of the costs to workers, the social costs, and the  
reason you didn't do it was because it was difficult to do?

30 A. No. Because...well, I think it would have





5 A. (cont'd.) been difficult to do, and of course we are not dealing with...we are dealing in terms of the social costs, you are dealing with a part of the problem which is past...what I call the iron grip of latency. It's unfortunate that we are in that situation with all the carcinogens in a workplace, but it is a fact and we can't do anything about it.

10 If you set a committee up, whether that committee is set up to do a job for the future, and it would have been an impossible job to calculate what the future social costs are going to be.

15 Q. But what I was suggesting, even if you look in the future, you could determine that if there was at the one fiber standard, if there was, let's say, just ten increased deaths...postulating ten increased deaths...what is the social cost of those ten increased deaths in terms of the hospital and welfare system, and in terms of the social agencies which have to deal with that problem in terms of the families. And then there is the question of what price you put on a life, which is...

20 A. Well, I don't...as chairman of the health and safety commission, and as a man who worked in a very dangerous industry and was almost killed in a serious accident in 1953, I'm the last man that would put a price on any life.

25 But I find you are asking me a really impossible question, as to whether we have tried to calculate for a time starting from the time when we put our recommendations in our report, to try to calculate the future social costs - how many people are still going to die of asbestos.

30 You see, if the disease is a latent...if the killer disease is mesothelioma, and other forms of lung cancer, then you're not dealing with a problem that starts in 1979. You are dealing with a problem that starts all the way up, progressively, from when asbestos was used.



Q. I guess where...

A. So I mean, I'm not avoiding your question. I'm just saying I would find it difficult to put down the parameters which would help us to make any calculation of this.

Q. Now, you got the cost from industry as to what they estimated the costs were of going to one fiber?

A. We got the costs from industry, and we got our factory inspectors to do a monitor on them on two things. First of all, what the capital costs would be in terms of money, and also the other figures that the employers had given us, which would be job losses as they said, in the carrying out of the limits.

The thing with both of these figures is that we now know that the costs weren't anywhere like as much as the employers said they were.

Q. This is what I was...

A. That's right.

Q. Did you do a study to determine what the costs actually were?

A. Yes, yes.

Q. I was wondering if, perhaps, though it would be possible to have those, the costs, the estimated costs and then the actual costs made available to the commission, because it's one problem that...are they in the report?

A. Yes, well, I can give you what we felt the costs to be, which was a total cost for the industry of something like eighty-four million pounds.

Q. This is what they told you, or this is what you estimated?

A. No, this was the refined wisdom.

Q. This was their...what they...?

A. No, based on employers' figures, plus our



A. (cont'd.) inspectors' monitoring of these figures.

5 In other words, the employers' figures weren't accepted at face value.

Q. But are the employers' figures in here?

A. No, the employers' figures are not there. These studies were done afterwards.

10 Q. Can you make the employers' figures available to us, as to what they said the costs would be before those were in any way altered?

A. Yes. Yes, we could...

15 DR. MUSTARD: Could I interrupt you a moment to get this straight? What we are asking for is the original projections, if they are available.

MR. STARKMAN: Yes.

DR. MUSTARD: Then the eighty-four million which is, I take it, your estimate?

THE WITNESS: Yes. Yes.

20 DR. MUSTARD: Then is there a third one, the actual cost, which is also available?

THE WITNESS: Well, it's very difficult. You see, again, the actual...

MR. STARKMAN: Q. Did you ask the employers for their actual costs?

25 THE WITNESS: A. You see, if you...

MR. LASKIN: Can we look at...can you tell us what is at page eighty-seven of tab three, and that might help. Is it appendix N?

THE WITNESS: Oh, you want me to look at the report again, do you?

30 MR. LASKIN: Sorry about that.

THE WITNESS: See, this problem, again, is muddled



THE WITNESS: (cont'd.) up by the fact that in some cases the costs were incurred to meet the one fiber limit, but in other cases instead of meeting the one fiber limit, they used other materials.

So we haven't got a clear question. What was...?

MR. LASKIN: Page eighty-seven.

THE WITNESS: Page eighty-seven.

Yes, that's right.

MR. STARKMAN: What are we looking at on page eighty-seven, I'm sorry? Or page eighty-eight? Is that what we are really looking at, the table?

THE WITNESS: Yes, well, these were the employers' estimated costs. That's not what I'm quoting. I'm quoting a refined exercise that was done after the report was published.

MR. STARKMAN: Q. Okay. Could the commission, is it possible for us to look at those?

THE WITNESS: A. I've said earlier on if the costs would be helpful to you, we can give you all the exercises that we've done on costs, because they were all done for the health and safety commission.

Q. Was there any effort made to follow up on it, like you said, some people didn't actually put in the monitoring equipment, some changed to other substances, etc.,... was there any effort made to see how many changed, how many went out of business, how many actually put in the necessary equipment, and what the actual costs were?

A. No.

Q. And how much unemployment actually resulted from putting in this equipment?

A. No, we haven't done any work on that because we haven't had the resources to do it. Also, the compliance with the one fiber limit for chrysotile was being achieved, as I said,





A. (cont'd.) and you can take this as definite, from me.

5 It was being achieved, and it really didn't make a lot of difference to me at that point, you know, what the thing had cost.

Q. I think the reason I'm asking the question is because if the commission were to consider certain fiber limits, and they received representations from various sources, including industry, which said it was going to cost this much and result in this much unemployment, it would be useful just by way of far analogy to see what actually happened when these estimates were done, and what the end result was - whether it was close, far apart, etc.

15 DR. MUSTARD: Could I ask a question about this? It may be a naive question.

I would think this is the kind of a subject social scientists and economists might be interested in. Have any of the people in your university studied this particular story at all? Are you aware of any information in that area?

20 THE WITNESS: No, I don't think so. You see, as I said, we have...we have had quite an intensive monitoring of this done by our inspectors, and through eighteen thousand visits to these particular factories, we know now that these limits are being achieved.

25 It's not part of my job to dig up a whole lot of facts for other people on these things. I'm here...I'm a decision maker in charge of a body that takes decisions. I deal with...I dealt with asbestos at the same time as dealing with a whole lot of other things during that two and a half years, but I move on and deal with other things.

30 DR. MUSTARD: But I just know that there are all kinds of social scientists and economists who like to go around



DR. MUSTARD: (cont'd.) and analyze the mistakes all the rest of us make and tell us what we did wrong, and I wondered if that had happened.

MR. STARKMAN: Q. I take it from your last comment that there was no...you are not aware of any studies that were..

THE WITNESS: A. That have been done on this, no.

Q. Well, or that were done on any ancillary benefits that might have accrued to industry through the reduction to the one fiber limit?

A. No, that's...you know, that's true.

Q. In terms of the other cost-benefit analysis, relating to the cost of government, it was always my impression that when you are doing a cost-benefit analysis, the cost of government services was excluded.

A. Yes, but then again, if there were to be regulations made...you see, although I get acceptability from the people who are involved, the health and safety commission has got to put proposals to government, to the secretary of state for employment or whoever might be involved.

Now, if I put proposals to him that don't also include the costs to the enforcement agency, then it means I haven't done a thorough job on costing it for him.

See, because I haven't got a bottomless pit - not by any means - as far as resources are concerned.

Q. So what you are suggesting is that if the cost of enforcing a one fiber standard had been very, very high, the government in England might have looked at it and said, well, we agree that one fiber is..would have had to balance it.

In other words, the government cost would come into consideration as one factor that you were aware of and took into account?



A. Yes, that could have been so. The fact was, with the kind of concern which was surrounding the asbestos problem, that reaction from politicians was unlikely.

But in terms of an organization which has got to look at its priorities, it was quite right that we should look at what this job which the advisory committee on asbestos had given us was likely to cost the central organization.

As it was, it didn't amount to a great deal of money. The extra work which was required from the enforcement agencies amounted to something like three-quarters of a million pounds a year, and that was considered to be a reasonable amount.

Q. On the question of enforcement, I am a little confused. I understand that there are inspectors and they go around to various plants, including those of the manufacturers of asbestos?

A. Yes, that's right. Yes.

Q. Do they actually do the monitoring of the dust counts, the fiber counts themselves?

A. Yes.

Q. So they are in charge of it?

A. They monitor the results of factories.

Q. Who actually does the count?

A. Well, the firm does the count, but the inspectors check on the counts themselves, and they also take samples and send to our laboratories for them to check on as well. So it is a check on the employers' figures.

Q. An ongoing count is done by the employers?

A. Is done by the employers, yes.

Q. It's done just periodically?

A. Well, we haven't got enough inspectors for them to be at the plant every day.

Q. So if a count comes back from a laboratory, that is over the acceptable limit, what happens to that?





Q. (cont'd.) Could you trace it through for me? The count goes off to the laboratory, it comes back and it comes back to the employer?

A. Yes. Well, the result comes back to the inspectors first, and the inspector goes to the company and says I want to have another look at this particular process, because it appears that your count is going high, is this a peak, have you had a peak here of one and a half fibers, and is there another time during the day it goes down to point five of a fiber.

Q. How often are the counts sent off to laboratories?

A. Oh, I couldn't give you an answer on that one.

Q. Is there any policy on it?

A. No.

Q. So it could be sent once a month, once every six months? I mean, is that the type of time frames we are talking about?

A. Well, it could certainly be once a month, yes, something like that.

Q. So on the average of, let's just say once a month, it goes to a laboratory, then automatically the results come back to the inspector who is responsible for that plant?

A. Yes.

Q. That person would look at it?

A. Yes.

Q. And if the count was...let's say it was over one.

A. Yes.

Q. Would they then go immediately out to the plant?

A. He would...if the exposure levels weren't being



A. (cont'd.) observed, he would go to the plant concerned and try and find out why.

5           You do get...you know, you do get peaks. It's measured over a four hour time-weighted average, you see, and so it's possible for you to get a peak of one and a quarter fibers, or...

          Q. I understand that, but what if it's over one on a time-weighted average?

10          A. Well, then, he would go out to find out why.

          Q. So he would go to the plant and who would he talk to when he was out there?

15          A. He would talk to the manager in charge. He would go to the manager in total charge first, and he and the manager in total charge would then go to the person directly in charge.

          Q. Would any penalty be imposed on them if...

20          A. Oh, yes. If the limit was being exceeded, our inspectors have got powers to serve two types of notices. One of them is a prohibition notice, which is like getting a parking ticket - you know, it's as quick as that - he just serves it, and it means that it's a prohibition notice, if it's an immediate prohibition notice, it means that that process stops straight away.

25           Or else you can give him an improvement notice that says I'm coming back here, I'll be back here in a couple of weeks time and when I come back and take a check, then you've got to have the exposure down to below the control limit.

          Q. And can he impose monetary penalties on the company?

30          A. No, he's got the power to take up prosecution against them then, and to do that he takes them into court and prosecutes them in court, and then there is financial penalty if



A. (cont'd.) the employer is found guilty.

Q. Do you have statistics on that, on the process you have just described, as to how many...

A. Prosecutions are taken?

Q. Well, how many prosecutions, what the penalties were, how many cease and desist orders, temporary and final, there were?

A. I think if my minder here can give me some...

Q. Well, perhaps if that could be provided to the commission...

A. Yes, well, we have got quite a bit of detailed evidence on the area inspectors' work.

Yes, notices involving crocidolite - that's where crocidolite has been moved in our society, not in manufacturing - in 1977, there was twenty-one immediate prohibition notices; in 1978, twenty-six; in 1979, ten; and in 1980, seven.

Notices involving asbestos other than crocidolite, immediate prohibition notices: 1977, nineteen; 1978, sixteen; 1979, thirteen; and 1980, fifteen.

There's also improvement notices and deferred prohibition notices. I could probably enter this, if that's all right.

Q. Are the prosecutions on that list as well?

A. Yes. In the four year period from 1978 to 1980, there were a hundred and forty-six convictions within that period - that's prosecutions and convictions. Some people got...in addition to that, eighteen of the informations were withdrawn, and fourteen were dismissed by the magistrates concerned.

But there were a hundred and forty-six convictions in that period.

Q. Does it indicate the penalties?

A. I don't know. I haven't got any details of



A. (cont'd.) the penalties here.

Q. What Act would govern this?

A. The Health and Safety at Work Act, 1974.

Q. I take it that these prosecutions, as you describe them, as against the company, not against the corporate officers?

A. They're against the company, yes.

Q. Is there any provision for prosecuting the corporate offices involved?

A. Yes, there's provision within the Act for prosecuting managing directors and chairmen of the board.

Q. Do you have any statistics on that, the use of those sections?

A. We haven't had any yet.

You will appreciate that the power to prosecute the managing director of a corporation or the chairman of a board would probably be taken in an incidence, say, of disaster proportions, or else with a long, long history of gross neglect on something else.

Q. Why would you assume that?

A. Well, I'm telling you that the mind of our enforcers in the U.K....

Q. Is that a policy?

A. No, I don't think it's a policy, but this is what I gather from talking to people.

I can say that we did have a disaster in 1974, before the Act was legal, we had a chemical company and there was an unconfined vapor explosion there and twenty-eight people were killed. The director general who deals with enforcement did talk to the managing director and the chairman of the company concerned, which was an amalgam of our own National Coal Board and the Dutch State Mines Company, and he did tell them on that





5 A. (cont'd.) occasion that had that disaster occurred when the Health and Safety at Work Act was in progress, that we would have been going for a prosecution on indictment. An indictment carries with it the possibility of imprisonment instead of a fine on this.

10 Q. I would like to talk briefly about the type of monitoring system that exists in England for workers, people working with asbestos. I take it that there are periodic medical examinations?

A. Yes. Well, there's nothing required in law about the medical surveillance, but there are periodical medical examinations that take place.

15 Q. You leave that to the discretion of the individual employer?

A. Well, again, this is...it's an employer's responsibility to do this, a general responsibility under the Act, for the care of his workers.

20 We also have within the enforcement section of our organization a body of medical people called the employment medical advisory service, and they monitor the medical examinations that are carried out, and on occasions have cross-checks with actual medical examinations of workers concerned.

Q. So this is doctors associated with your...?

25 A. Part of the health and safety executive, which is the enforcing arm. of the...

Q. And they are supposed to be monitoring the health checks?

A. Yes.

Q. Monitoring where those are done and the results?

30 A. Well, among other things, they do this in their duties.



Q. What about in the construction area, construction and demolition? What type of monitoring goes on in those activities?

5 A. Well, frankly it's very difficult. If you are talking about the parts of the construction industry where asbestos is being demolished, for the reasons I gave earlier it's very difficult to do this.

10 We'll only start taking hold of this situation when we introduce the licencing system which Cyril Burgess has been telling me is due to be operative.

Q. Would this be licence...I understood that the licences were for demolition or delagging. Would that also be for construction? Licence construction as well?

15 A. Well, it could apply there. Well, we don't... we visualize it mainly in line with the removal of asbestos, you know, rather than the erection of it.

Q. So it won't apply to construction?

20 A. We are really trying to catch the jobs that really give off exposure which is really quite horrendous. We are dealing with...

Q. Don't you think the cutting of asbestos pipe in the open air would have a fairly high exposure?

25 A. Well, nothing like the kind of operations I'm talking about. Nothing like going down into the boiler house of a big hotel, for instance, to take out an old boiler which has been lagged with blue asbestos, and replace it with a new one. I mean, nothing like that.

Q. So there won't be any controls, licencing of construction?

A. On construction, no.

30 Q. As with repairs...

A. That will be done in line with the enforcement



A. (cont'd.) of the Health and Safety at Work Act in general, and with whatever regulations apply in the construction industry.

Q. Well, I'm concerned about...were there ever considerations given to the monitoring of the health of construction workers through some sort of centralized system?

I realize there's a lot of small employers doing a lot of small jobs...

A. Yes, well, again we've got working to the commission a construction industry advisory committee, and they have got a program or work which is approved by the commission from time to time, and one of the things that they have dealt with is the business of asbestos on sites, and things like you are talking about - the cutting of asbestos and all that - has been the subject of their consideration.

Q. I'm talking about something a little bit different. I recognize that there is an effort made to control asbestos on construction sites, but I'm talking about the monitoring of the health of the construction workers in case the controls don't really work, or in case their lungs are filling up with asbestos fiber. Is there an effort made to give them periodic medical examinations?

A. There's no specific legislation that singles out construction workers for regular medical examinations.

Q. Would you think that such legislation is necessary?

A. I don't think so.

Q. Why not?

A. Well, because I don't think that the operations that are there in connection with construction would warrant regular medical surveillance.

You have got many problems on the construction





A. (cont'd.) industry, but occupational health is not our major problem in that particular industry.

Q. That's what you believe?

A. Hmmm?

Q. You believe occupational health is not...

A. Yes, well, I'm going by the situation as I know it, and I'm also going by the very first industry committee that the commission set up in 1975 was the construction industry advisory committee, and there is no experts on that committee. It's a committee which is completely composed of workers and employers, and they haven't made health in the construction industry one of their priorities, and I would be guided by them.

Q. Is it the same fiber level that applies in the construction industry - that's the one fiber?

A. Yes, the one fiber.

Q. And I take it it's supervised in the same way you have described the supervision of the manufacturing?

A. Yes.

MR. STARKMAN: Thank you.

MR. LASKIN: I'm sorry, Mr. Commissioner, I didn't introduce Mr. Hodson, who is here on behalf of the Government of Ontario. He is taking the place of Mr. Lederer and Mr. Edwards today.

MR. HODSON: Pinch hitting.

DR. MUSTARD: Thank you. We have enough hitters, because Linda is going next.

CROSS-EXAMINATION BY MISS JOLLEY

Q. You mentioned, Mr. Simpson, that your report was issued in 1979?

A. Yes.

Q. And that new evidence has come out since then, and that you have not in fact put in the recommendations, you are



Q. (cont'd.) waiting for the E.E.C.

How do you foresee taking the new evidence into consideration in the development of new proposals?

A. I said that knowledge has moved on since then.

Q. Right.

A. And I think it has moved on. There's some new figures out on excess mortality on lung cancer, which were not included in our report.

Q. And asbestosis, from your own country.

A. That's right. And there have been another couple of studies that I'm aware of from...on workers working with amosite...which would tend to confirm the opinions of the advisory committee, and not the decisions that have been reached by the European community on this.

I think these are two of the main pieces of knowledge that have come out.

Q. You suggested that Scandinavia may follow the E.E.C. We in fact had the Swedish National Board and the Swedish government, and I don't think that they would consider that they would be following the E.E.C. I think they have set a quite clear, distinct statement about asbestos, in Sweden.

A. Well, you see, what I know is this, that people talk about these things, but if the recommendations of the advisory committee were adopted by Britain, Britain would have the tightest controls in the world on health and safety. This is what I do know.

So I don't know what the Swedish government told you, but there is a part of report, in fact, that deals with the comparative control limits from all the countries in the world, and by careful comparisons there we know that our report would give us the tightest controls in the world.

Q. Well, Sweden in effect told us that they had



Q. (cont'd.) gone to a ban on asbestos, with allowing certain industries to use asbestos.

A. That's right.

I don't find that from reading the legislation. That's all I'm saying to you.

Q. You mentioned the fact that you've set a point two fiber per milliliter level for crocidolite...or it was set in 1969, and essentially it's a ban and you don't want to ban it because, of course, it's in construction.

A. Yes.

Q. I'm interested because you have set it essentially as a TLV or a maximum permissible level, or whatever you have...

A. A control limit, yes.

Q. A control limit.

A. Yes.

Q. For demolition, and do you actually measure during demolition and keep...do they actually keep...

A. Yes. If they knew there was any sizable job being done on blue asbestos, there would be an attempt to go there.

Q. And measure?

A. But then you see, it can't be done without the workers without wearing protective equipment.

Q. Right, but you actually do the measuring?

A. Yes. Oh, they do measure and I have got measurement figures within the eighteen thousand visits that were made.

Q. The maximum exposure limits that you spoke about, the control limits, essentially, they are over a four hour period, you said?

A. Yes. As far as asbestos is concerned, it's for what you call measured on a four hour time-weighted average.



Q. Right. What would you think of a forty hour work week time-weighted average?

5 A. I'm not sure. It has never been put to us, except that it's extremely wasteful of enforcement officers' time.

See, if you want...it's all right for the company who are there all the time, but in order to check up whether the company's results were true, you would have to have an enforcement officer there for forty hours, measuring it and checking it.

10 I mean, we've had...we've got this problem with some other things, an eight hour time-weighted average. It means it's a day's work for a very highly professional person, to be there for a whole day to check up on the time-weighted average.

15 Q. In Ontario the proposals for our asbestos standard include a forty hour work week.

A. Well, I mean, that's all right. I said each country will find its own answers. We find it wasteful of enforcers' time, and also I wonder whether you do find any great difference at the end of it, on measuring with a four hour  
20 time-weighted average and a forty hour average.

Q. When you were discussing the whole issue of asbestos in public buildings, you suggested that three or four coats of sealant might be a more appropriate way of dealing with asbestos.

25 A. Well, I said...I made one or two qualifications to that.

Q. Except when MP's are exposed?

30 A. No, no. Well, you see, I did say that provided the asbestos wasn't damaged and was in good condition, and provided it wasn't near air ducts or a heating system which would make it even more friable, and it would have a pressure to push it out into the atmosphere...you see, the House of Commons failed





5 A. (cont'd.) to pass both these tests. You see, the asbestos that had been put in the roof of the old chamber, God knows when, was in a friable state and it was close to the air conditioning systems, and so it was starting to be blown about in the chamber, fell through the gratings and was blown about. So that these two...I wouldn't like you to think that we had one law for the House of Commons and another law for the workshop or a public building.

10 Q. We wouldn't think that.

A. You know, a lot of people would say that there was a good idea for turning it around the other way.

15 Q. The work practices in terms of removal or demolition, do they include wetting the asbestos down with a surfactant as well?

A. Can you say that again?

20 Q. Do they include wetting the asbestos before you remove it...

A. Yes.

25 Q. ...with a surfactant, to increase its permeability?

A. Yes, that's right. It includes wet processing, yes.

30 Q. If you sealed the asbestos with three or four coats of sealant, it seems to me it makes it incredibly difficult to remove asbestos safely in that kind of...

A. Well, it could make it a bit more difficult with the ordinary wetting agents, that's quite true. But you have got a balance to strike there and we did have a whole lot of... see, the reason why I quoted these headlines from some of the papers is that there is nothing headlines like that to get the municipalities running scared on this, and saying where have we got asbestos, let's get it out.



Q. I think it's fair to say those headlines created this Royal Commission.

A. Yes.

Q. May I ask about health and safety representatives, and you've indicated some of their functions. Do they have the right to close down an unsafe operation?

A. No.

Q. No?

A. No. They have that right in Sweden, but they haven't got that right in Britain. The reason for this is that the trade unions weren't particularly keen to have that right, because it's one thing to visualize...it's a good thing to think that a workers' representative should have the right to order a process to stop, but then what you've got to consider in these circumstances is, what happens then.

See, it's not enough just to say that a safety representative has got the right to stop a job. There's a whole question of what happens to the people whose jobs are stopped. Does the employer pay them for the time they are stopped, or does someone else pay them? There's a whole lot of industrial relations questions that arise from it, which have got to be tackled as well there.

For all these reasons, or for some of these reasons anyway, the trade unions in Britain didn't want...see, there's a lot of trade unions that have got very explicit in their rule books about who can order what to be stopped, you know, and some unions are nationally approved, and some unions the local has got to approve it. In this case, you would be putting a scythe through the whole of the rule books, because you would be singling out one individual in the union who had the power to stop work.

Q. Can the health and safety representatives



Q. (cont'd.) take monitoring equipment on their tours of the workplace?

5 A. Well, they could if they wanted to, yes. If they knew how to use them. Yes.

They are also advised within the safety representatives regulations, they are also advised where they can get advice on these things if they want to query the employer's figures, in addition to the advice of the factory  
10 inspectors and the health and safety executive.

Q. You mentioned that there are regulations concerning essentially the right to know about what's in the workplace.

A. Yes, yes.

15 Q. Does that include that workers have the right to know all the chemicals that they are being exposed to on the job?

A. Yes.

Q. The employer must give them a...

20 A. We have a special section of the Act, section six of the Act, which deals with the duties of people who supply good to other people - like substances, and plant and equipment - and they've got a duty within section six to give information to the user with the substances they supply. The employer has got a knock-on duty under section three of the Act to supply  
25 information to the workers there. The safety representative has got a special regulation within the nine regulations that govern the situation. He's got a special regulation that deals with information, information that he should have from the employer.

30 Q. What about training of health and safety representatives?

A. The trade unions wanted to train the health





5 A. (cont'd.) and safety representatives in the same way as they train their shop stewards, and in order to allow this to happen, accompanying the safety representative regulations, there is an approved code of practice which deals with time off for training.

Q. And the employers pay the time off?

10 A. The employer pays the safety representative for the time that he spends being trained.

Q. On union training?

A. Yes.

MISS JOLLEY: Thank you very much, Mr. Simpson.

DR. MUSTARD: Mr. Hodson.

MR. HODSON: Thank you.

15 CROSS-EXAMINATION BY MR. HODSON

20 Q. Mr. Simpson, just to take you out of the field of asbestos for a minute, you are chairman of the health and safety commission, you deal with a lot of other substances. I wonder if you could indicate to us how your commission establishes its priorities for regulating chemical and biological substances?

25 A. Well, we've got five subject committees that deal with specific subjects, and then we've got, at the moment, I think, thirteen industry committees that deal with the health and safety in particular industries, and the health and safety commission deal with all these things in general, that come to them.

25 The committee that's dealing with toxic substances is our advisory committee on toxic substances, and they have got a priority program which they are working through.

30 They are doing two specific tasks at the moment. They are carrying out a long program of doing toxicity reviews on a whole number of substances. They are attempting to do about six substances a year in this work, and if you look at the work



A. (cont'd.) of NIOSH in the States, that compares quite favorably.

5 The difference between the work of the advisory committee and NIOSH is that our people on the advisory committee would be taking note of the practicalities of the control limits that they are suggesting. It wouldn't be the kind of medical criteria that NIOSH put out. They would do the whole job.

10 The second task which they are carrying out at the moment is that they are discussing a general framework of regulations into which the various toxic substances can be fitted, can be slotted in when the control limits and the principles of control are approved.

15 In addition to that, we get a few occasional wild ones which are maybe dealt with by the commission as a matter of emergency from time to time...sometimes some things that are picked out by the European community, or some other substances that happen to arise from time to time. But that's the way we generally tackle these things.

20 Q. What's the role of the media or the public in concentrating your attention on certain substances then?

A. Well, the media is quite a potent motivator. I don't...but, you know, they can cause quite a bit of public concern. On some occasions the concern is justified, and on some occasions we may feel it's not. But I would be the last to dismiss the media as a motivator in these things.

25 Q. What sort of evidence do you require to identify carcinogens?

30 A. Oh, well, again, we would, you know, we would either have to have the kind of collected knowledge that we've got on asbestos - which is hardly available at all for other substances - or we would have to have some reasons, either by reason of hearing or knowing about fairly serious effects from maybe very, very short exposures.



5 A. (cont'd.) This is one of the very worrying things about amosite, that there appears to be some evidence of lung cancer from very, very short exposures there.

In cases like these we would move without waiting for the human evidence to collect, that I talked about earlier.

Q. Where you don't have any human evidence, how do you set exposure limits?

10 A. Yes. You mean running the rule over a substance before it comes into industry at all, and banning it. I don't think we've ever been faced with that, as far as I know. I'll have to see if Cyril is nodding up or down on that one. He's probably just nodding off.

15 I don't think we've had a case like that, where there's a substance coming on the market. But we have got in position at the moment a requirement that manufacturers who desire to use new substances have got to notify the health and safety executive of their intention to use these new substances, and there is accompanying the requirement to notify four separate codes of practice dealing with the different physiochemical  
20 properties of the substances, which the information, the testing information, etc., has got to be based on.

So we are moving to the situation. We've got an epidemiological unit there, and also a unit which is going to deal specifically with screening these new substances.

25 This, of course, as you probably know, is a requirement following one of the directives from the European community.

30 DR. MUSTARD: Can I interject? What do you do if a company puts in information that it is going to use a chemical substance which is positive in at least two of the standard bacterial assay techniques for mutagenicity, and is a carcinogen in two species of animals - in rats and rabbits?



5 DR. MUSTARD: (cont'd.) Have you any policies for handling that, and if so, who would handle the decision about whether it could be introduced without controls, or if it has to be introduced with controls and how the controls are determined?

10 THE WITNESS: I'm in some difficulty with that, because the requirements that I've told you about have only operated since the 18th of September last year, and I'm not sufficiently up to date with some of the results. I don't know if there's been any specific questions like that.

I mean, certainly, I'm not able to answer that. If you would like me to try and give you a note on that one, and get back, I would be very pleased to do this.

DR. MUSTARD: If you have any information.

15 THE WITNESS: So you really want to know if there's...if a substance looks to be a proven mutagenic and it is positive in two other standards as far as animals are concerned?

20 DR. MUSTARD: Yes. I guess really the question I'm posing is, if this substance is in a biological assay system, by criteria which many jurisdictions have, and is considered to be a potential carcinogen, how do you allow it to be introduced into the workplace.

MR. BURGESS: Mr. Commissioner, would you like me to interject here, if this would be helpful?

DR. MUSTARD: Yes.

25 MR. BURGESS: I think, sir, it works rather like this, and I think the point to get across is that we have no standard frame. There is no arbitrary criteria for deciding whether a substance is a carcinogen, in the United Kingdom, or indeed, I would suggest, in Europe. So it's a question of treating every case on its merits.

30 With new substances, with the notification of





MR. BURGESS: (cont'd.) new substances regulations, the manufacturer, subject to certain exceptions, will have to hand in the testing scheme to the health and safety executive, and this testing scheme must not only report the results of certain tests, it must also make recommendations for its labelling and for its control in safe handling.

The health and safety executive and the department of the environment, jointly, will assess this notification, and if they are content with the manufacturer's proposals, well and good. If they are not content with it, then the particular substance, I guess...although we have no practical experience yet... will put up to our advisory committee on toxic substances for its consideration as to what the appropriate precautions, if it's not so dangerous that there ought to be a ban.

The policy on prohibition or banning, as far as that is concerned, I think these are well set out in volume one of the final report that you have here - namely, that ever since this was written we have been taking the line that we should have two criteria. First of all, the substance - there should be evidence of very serious risk. That's point number one.

The second is that controls already existing, or future controls, have been found to be incapable of controlling the risk, or seem unlikely in the future to control the risk.

So there's those two elements where we consider prohibition. Insofar as history is concerned, we have had arbitrary bans on some substances - a blanket ban across the board. I think this will be more and more unlikely in the future. Any prohibitions are likely to apply to a substance used in a particular way, or for a particular process.

Thank you.

MR. HODSON: To follow up on that...thank you...how do you handle the problem that a lot of the information about



Q. (cont'd.) these new substances is thought to be confidential, by the parties that are producing them, and therefore they don't want to disclose to your committee?

MR. BURGESS: Do you want me to intervene again?

DR. MUSTARD: Whichever one of you can answer it most easily, please do.

MR. BURGESS: Well, commissioner, I think this is a difficult problem, this question of confidentiality. It's one reason why our regulations to implement the sixth amending directive in the United Kingdom has been delayed, so that we could satisfy industry and indeed ourselves that the confidentiality provisions were adequate.

Now, when a notification comes to us, there's certain categories of information that cannot be considered to be confidential at any price, as it were. The basic information, and I can deposit with the secretary a list of those particular types of information...well, I won't list them here, but I can certainly deposit them with you.

I think the important things that are to be kept confidential are the detailed results of the test, which cost a great deal of money to conduct - particularly if a lot of animals are involved, and therefore valuable commercial information.

Of course, there's still the problem of people trying to work back to the original empirical and structural formula of the compound, but once the substance comes on the market, I believe the competitors will do that anyway, and very quickly, too.

MR. HODSON: Thank you very much, Mr. Burgess.

MR. HODSON: Q. Mr. Simpson, can you tell us a little bit more about the use that your commission makes of advisory committees? How do you use them, when do you use them, how are they composed, how are they funded? What really is their purpose?



THE WITNESS: A. Yes. They are funded entirely by the commission. All of our advisory committees that are  
5 dealing with industries are composed completely from workers and employers. They are chaired by the head of the national industry group person on the health and safety executive, and also serviced by the health and safety executive.

The subject advisory committees, committees like, for example, the advisory committee on toxic substances, the  
10 advisory committee on dangerous substances, the advisory committee on major hazards, the medical advisory committee, they are all, again, composed of workers and employers, but they also have got some what you would call, for lack of a better word, some experts on them, some medical people or some scientific people, some technical people, on them.

As I say, these committees start their lives off with a fairly tight terms of reference as far as a subject is  
15 concerned, so they don't stray into the territories of other advisory committees, and the first task that they do is to draw a program of work.

This program of work is then submitted to the health and safety commission, and my commission is a busy commission, it meets every two weeks. There is a meeting once every two  
20 weeks, and the commission either approves the work program for the committee, or they maybe make some suggestions, or maybe say well, we think it's not the time to be doing this, or why don't you consider doing this instead of doing that, and then the advisory committee starts its work.

When the advisory committee reaches conclusions, these conclusions come back to the health and safety commission and we look at them to see whether the conclusions are proper  
25 for regulations, or for codes of practices, or for guidance, or for all three. The work of the committees proceed like that.





A. (cont'd.) As they finish one work program, they start another. Then the process renews itself again.

Q. How do you make a decision to phase a committee out?

A. These committees won't be phased out as long...they have all been selected, the committees themselves have been selected in priority order according to the problems within industry. When we've no problems that we need any help on, on construction, then we phase the construction industry advisory committee out. But that happy time, I'm afraid, won't be reached, regrettably, for a very, very long time in the future.

Similarly with the other committees that are dealing with foundries, or the ceramics industry, or any of the other ones which are set up. We've got enough problems then to keep them going for a long time.

Q. But you have disbanded the advisory committee on asbestos?

A. On asbestos, because that was a special one-off committee, which was set up to do a report on this. It wasn't...it was a committee which was set up jointly by the secretary of state for employment and the health and safety commission, and they asked me to chair it as well as chairing the health and safety commission, and I agreed to do it.

So it was a special committee set up to do a particular job.

Q. Mainly a research committee? Was it mainly a research committee?

A. No, no, no. It was a very practical committee, because...you know, I've read your document on policy options there, political framework and policy options, and a lot of these things were factors in influencing the decisions of the



A. (cont'd.) committee.

5 So, I mean, it was set up to advise action on the problem of asbestos, and once it had finished that job there was no reason why the ongoing problem which we've got on asbestos couldn't be handled by the advisory committee on toxic substances, then.

10 Q. I see. What's the relationship between the health and safety commission and, specifically, the executive of that commission, and the various advisory committees? Is there a relationship in terms of staffing, in terms of the advice that's given in both directions?

15 A. All the advisory committees....health and safety commission advisory committees, the health and safety executive is the enforcement agency under the Health and Safety at Work Act. Both the health and safety commission and the health and safety executive are corporate bodies in their own right. I am the accounting officer for both the health and safety commission and for the expenditure of the health and safety executive.

20 Because the commission are the body which dictates policy or makes policy proposals for ministers, or makes proposals for guidance or for codes of practice, it means that we do have certain powers to give some general direction in the way things will be done. But we have no power to direct the health and safety executive in any particular case.

25 In other words, if there were a disaster and it looked as though the firm were at fault, the health and safety commission couldn't say we think that this company should be prosecuted in that particular case. We've got power to give sort of general direction, but no power to direct in a particular case.

30 The health and safety commission also allocate... are the body which allocates enforcement powers to our local



5 A. (cont'd.) authorities. We have a whole system of enforcement in nonindustrial premises, which is mainly done by local authorities through what we call environmental health officers. We have power to allocate the areas in which the local authority will do the enforcement.

So this is the relationship between the commission and the executive.

10 Q. Thank you.

Can you tell me, do you use the technique of risk assessment?

A. We've got a hazard assessment unit, which works in conjunction with a major hazard unit, but the risk assessment business is not a major part of our business.

15 No, we've got ways of trying to calculate risk and run the rule over a survey.

20 What we're doing at the moment on this, is that the main problems of this assessment is in what we would call major hazard industries. We have got a major hazard advisory committee, and they, along with people who deal with the meetings in Europe at the moment, are busy on a directive in Europe which, in addition to dealing with major hazards, also encompasses the kind of things that happened in Italy at the time of the Seveso disaster there.

25 The broad framework of legislation there will be a notification procedure requiring all companies that are storing dangerous substances in particular quantities in the place, either in the process or in storage, they would be required to notify the fact that they were actually there and doing this, to the health and safety executive.

30 Out of these notifications, a certain number would be selected for hazard surveys, and so our risk assessment, as you would call it, would take place when we were doing the



A. (cont'd.) hazard surveys, selected from the companies who are required to notify under the major hazard regulations.

There's work going on, but we call it by a different name.

Q. Thank you.

Just briefly, you have indicated that companies in the U.K. have no difficulty getting below the one fiber level. Why, then, do the regulations not require this?

A. Hmmm? Why do the regulations not require it at the moment?

Q. Yes.

A. Yes.

Q. They do require it at the moment? If companies have no difficulty...

A. They've got no difficulty complying with the one fiber limit at the moment. Yes, that's true at the moment.

But at the moment, we don't have any regulations at the moment requiring one fiber. What we've got is, we've got a directive being discussed in Europe, and I don't think there's a lot of disagreement about the one fiber limit there, plus a recommendation of the advisory committee which the companies in Britain at the moment are complying with.

They are complying with this one fiber limit voluntarily at the moment. That's what the legal situation is.

Q. To take you to the 1969 regulation, and comparing it to the draft regulation, you seem to be moving from a system requiring notification to one requiring licencing. Can you indicate to us why that's occurring? What the philosophy behind it is?

A. Why...?

Q. Why are you moving from a system requiring





Q. (cont'd.) licencing?

A. You are talking about a particular...

5 Q. I'm looking at your two regulations - the 1969 regulation and the draft regulation which is...

A. Yes, which is in our first report?

Q. Yes.

10 A. Yes. Well, these licencing regulations are required because of the unique situation in which these processes are being carried out.

15 That first report refers to...I'll get the proper name of it here, when I find it...the first report refers to work on thermal and accoustic insulation in sprayed coatings. That's the first report. We are requiring the licencing regulations there because the circumstances in which this work is carried out is not in a workshop situation. They are travelling firms and travelling workers, and mainly very, very small companies that go to do these things, and without...the only way we can put any control over the integrity of their work is by having a look at them beforehand and issuing them with a licence, because chances are 20 if an inspector does fall upon them, it will be completely by accident that this takes place.

25 There are two ways that...there's only two other ways that we might find out where this work is going on. One is by accident, and the other one is by some company who has submitted a tender which includes all the control procedures, who is undercut by a company who is not doing any of the control procedures, and that first company informs the health and safety executive, in fact, that that work is going on, and he does it because he is undercut and he is rather miffed about it.

30 If you study the problem here, I'm not saying that our licencing system is an effective answer. It's one way of firing a shot across the bows of all the people who are in this industry,



5 A. (cont'd.) and saying if you haven't got a licence, then you can't operate on this. In order to get a licence, you've got to tell the health and safety executive, and the health and safety executive have a look at what kind of equipment you've got, what kind of training your foreman has had, and so on, before they decide to issue a licence.

10 The same kind of problem you've got with trying to protect people who do work in their homes, who make celluloid dolls in their homes or do anything like that. You can't enter their homes to do your job, so you've got to try and control the situation from the supply side.

15 Q. Just to ask you a question or two on your inspectors, you say your inspectors have made something like eighteen thousand visits. We are kind of interested to know how many inspectors do you have and how frequently do they in fact visit places of employment where asbestos is being used?

A. Well, we've got about, at last count I think, somewhere about eight hundred and eighty inspectors.

20 They have been visiting the asbestos factories much more over the last two and a half years than they will be doing in the future, because we have had this special monitoring exercise following up the recommendations of the report, and the work which was started then.

25 Q. With eight hundred and eighty inspectors, I take it the eighteen thousand figure is eighteen thousand a year, is it?

30 A. No, it's eighteen thousand over...Cyril is going to give me some information on this...that's...Cyril reminds me that eighteen thousand are the number of samples that were taken, not necessarily the number of visits. But we have taken eighteen thousand samples from those places.

Q. Okay, so you've got eight hundred and eighty



Q. (cont'd.) inspectors inspecting every workday of the year, presumably. How frequently are they visiting a substantial factory using asbestos, with a hundred workers, how often is it going to be visited in a given year?

A. Can you help me on that one, Cyril?

Q. Just a ballpark figure.

A. I mean, what would be the average length of time, about three months between a visit, or something like that, to an asbestos factory?

MR. BURGESS: If I might interevene, Mr. Commissioner...

DR. MUSTARD: Sure.

MR. BURGESS: ...I think it would be wrong to give a median time, and there's several reasons for this. The first is that we run special surveys annually where there are particular problems at that period of time, so round about 1974 you would find every asbestos workplace visited several times, probably, in that year. Then we have to move our attention onto other problems, perhaps vinyl chloride, perhaps carbon disulphide, and the pressures and priorities change.

But underlying all this is a priority system for the deployment of the field force of inspectors that we have, which is based on a subjective rating scheme, which takes into account the efficiency of the company based upon, perhaps on its profits, partially, its efficiency of management. Because we find that affects the safety performance as well.

This scheme also considers the criteria of the particular risk in the factory, the numbers of people employed, and so on and so forth. And by this means the area director sets up a pecking list of factories in order of visits.

When the visits are paid, there is a feedback on this priority rating system and the factory may move up and down





MR. BURGESS: (cont'd.) in it - it probably will, and therefore there is no average time for a particular factory visit. You may not be visited, possibly at all, if it's of such  
5 minor importance. Others might have visits several times a month.

MR. HODSON: Are inspectors health and safety inspectors, or is there a split? How do you handle the problem of the special training needed for the health aspect of the impact of asbestos?

10 THE WITNESS: A. They are health and safety inspectors. The general description of the training would be that they are first of all selected, most of them with good class degrees, sometimes they find their way in through other avenues. They go straight to an area where they learn something about the feel of the work, they go out with other inspectors and see how  
15 the other inspectors do their work. This carries on for about nine months, and then after nine or ten months they then go to one of our universities where they have a six month residential course. They don't do any work for the health and safety executive at that time, they are on a course.

20 This course is split between health work and what you would call the safety work, accident work. At the end of this six month course they are set an examination. If they pass the examination, they go back out into the areas again, not necessarily the same area, it could be a different area...our inspectors change stations maybe seven or eight times a year in  
25 the course of their work...they stay in these areas for a period that takes them up to two years, and during this time, between university and the two years, they sometimes continue visiting with another inspector, they do fairly simple inspections on their own, you know, gradually gaining competence.

30 Then once they have been with us for two years, then on the basis of the reports from the area director and the



A. (cont'd.) principal inspectors that they have worked with, we panel them and look at them, and decide whether we want to hire them permanently.

5 It's quite a big decision for us, because in present money terms it means that you are looking at a man or a woman and saying, if they are young as they are at the moment because we've got the foul wind of unemployment behind us in our recruitment program, we are looking at people that we are probably going to spend something like two hundred and seventy-five thousand pounds on in the course of their working life.

10 But they are on probation until they do this two years. And even then they are far from being inspectors in the real sense of the word, because so much of their work is connected with people and different types of people that there is really a whole lot of skills that really can't be taught in universities or anywhere else, that can only be taught on the beat and in the workplace.

15 MR. HODSON: Thank you.

MR. Commissioner, I am the new boy on the block here. How long do you sit and how long do you want to sit?

20 DR. MUSTARD: Well, this Commissioner is going to close you out very soon for reasons which I won't disclose to you.

MR. HODSON: Well, I'll be polite enough not to ask, too, Mr. Commissioner.

25 If that's the case, then, Mr. Commissioner, those are all my questions.

Thank you very much.

DR. MUSTARD: That gives the Commissioner a chance to ask two questions, if I may, quickly.

The first one I have to ask is related to what our chairman would have asked of you.

30 THE WITNESS Yes, so you are asking these by



THE WITNESS: (cont'd.) proxy, are you?

5 DR. MUSTARD: I don't want you to worry about giving detailed answers at the moment, but I would appreciate it if you would take tab thirteen in your file...

THE WITNESS: Oh, sorry, yes.

10 DR. MUSTARD: ...and look at item twenty-two under asbestosis, on whatever page it is, in which you discuss the occurrence of transient polyarthrititis and rheumatoid arthritis in relation to asbestosis.

15 I would appreciate it if you would consult with whoever the medical people are within your system and ask them what relationship they make between transient polyarthrititis and rheumatoid arthritis. I would not expect you to be able to answer that question...

THE WITNESS: No, I don't know that.

20 DR. MUSTARD: ...but if you would send that information to us, it would be most helpful, because I see an association there and our good chairman has always asked questions on that subject anytime it would appear. It's called the nexus of health effects from asbestos, and I think if you could give us that information, we would appreciate it.

25 The second thing I would like to ask a lot of question on, but I can't, but it's to pick up what the rest of you were asking questions about. I am left with the distinct impression that your industry can control at considerably less than one fiber per ML. I would appreciate it if you have information as to what they control it at, if you could send that to us.

30 THE WITNESS: What I said...I don't want to give a wrong impression...I said that they were all complying with the one fiber limit, and some of them were below this.





DR. MUSTARD: If you have information as to what they can control at, it would be most appreciated.

I won't go into my other pet subjects, such as periodic x-ray examinations on workers, if you calculate the risk of x-ray exposure versus ...

THE WITNESS: Yes, well...

DR. MUSTARD: ...because that's an interesting question which we'll get into some other time.

On behalf of my colleagues who are not here, and counsel out there, I would like to thank both you and Mr. Burgess very much for taking the time to come to meet with us, and to disclose to us a substantial part of the reasoning that has gone behind the U.K. experience in this.

I can state that certainly this commission received considerable input from and guidance from the work which you and your colleagues have done in the United Kingdom.

So on behalf of everyone, thank you very, very much for taking the time and come and meet with the very weakened team today, which shows how desperate it is when it's left to an old has-been to sit in as the chairman of the commission for the day. I apologize for the standin, but I have enjoyed having your company.

Thank you very much.

THE WITNESS: And thank you for treating me so courteously.

-----  
THE INQUIRY ADJOURNED

THE FOREGOING WAS PREPARED  
FROM THE TAPED RECORDINGS  
OF THE INQUIRY PROCEEDINGS

Edwina Macht  
EDWINA MACHT







